

Obesity Fitness Expo 2017: Childhood obesity - Horia Al Mawlawi- Prince Sultan Military Medical City, KSA

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Childhood obesity is a major global health crisis in recent times. The prevalence of childhood obesity has increased since few years in all pediatric age group in both sexes. About 22 million children below 5 years of age are overweight across the globe. The number of overweight children and adolescents has doubled in last 2 to 3 decades in the world. World Health Organization on childhood obesity found that 41 million children below 5 years of age are either obese or overweight. However more than 90% of cases are idiopathic and less than 10% are associated with hormonal or genetic causes. This disorder is mainly caused by imbalance between calorie intake and calories utilized. Heavy calorie and fat content in diet of recent times and lack of physical activity is associated with increased risk of obesity. Physical, psychological and social health problems are caused due to child health obesity. Comorbidities associated with obesity and overweight are similar in children as in adult population elevated blood pressure, dyslipidemia and high prevalence insulin resistance and type-2 diabetes appear as frequent complication in the overweight and obese pediatric population. Measures taken in the prevention and treatment of child overweight and obesity are urgently required mainly including healthy diet and physical activity, when lifestyle modification is not enough to reach loss of weight and obesity complication can affect child health, if child age is 10 years or above pharmacotherapy can be recommended. Bariatric surgery is done on children selected carefully based on the sub group with obesity related condition that threaten the child health where lifestyle and medication have been used but found ineffective.

Childhood obesity has reached epidemic levels in developed and also in developing countries. Overweight and obesity in childhood are known to possess significant impact on both physical and psychological health. The mechanism of obesity development isn't fully understood and it's believed to be a disorder with multiple causes. Environmental factors, lifestyle preferences, and cultural environment play key roles within the rising prevalence of obesity worldwide. In general, overweight and obesity are assumed to be the results of an increase in caloric and fat intake. Childhood obesity can profoundly affect children's physical health, social, and emotional well-being, and self-worth. It is also related to poor academic performance and a lower quality of life experienced by the kid. Many conditions like cardiovascular, renal, hepatic neurological, metabolic, orthopedic, pulmonary disorders also are seen in association with childhood obesity.

It is widely accepted that increase in obesity results from an imbalance between energy intake and expenditure, with a rise in positive energy balance being closely related to the life-style adopted and the dietary intake preferences. However, there's increasing evidence indicating that a person's genetic background is vital in determining obesity risk. Research has made important contributions to our understanding of the factors associated with obesity. The ecological model suggests that risk factors of child for obesity include dietary intake, physical activity, and sedentary behavior. The impact of such risk factors is moderated by factors such as age, gender. Family characteristics parenting style, parents' lifestyles also play a role. Environmental factors like school policies, demographics, and parents' work-related demands further influence eating and activity behaviors.

Genetics are one among the most important factors examined as an explanation for obesity. Some studies have found that BMI is 25-40% heritable. However, inheritance needs to be coupled with contributing environmental and behavioral factors in order to affect weight. The genetic factor accounts for fewer than 5% of cases of childhood obesity. Therefore, while genetics can play a task within the development of obesity, it's not the explanation for the dramatic increase in childhood obesity.

Basal rate has also been studied as a possible explanation for obesity. Basal metabolic rate, or metabolism, is the body's expenditure of energy for normal resting functions. Basal metabolic rate is accountable for 60% of total energy expenditure in sedentary adults. It has been hypothesized that obese individuals have lower basal metabolic rates. However, differences in basal metabolic rates are not likely to be responsible for the rising rates of obesity.

Literature provides the main factors behind poor diet and offers numerous insights into how parental factors may impact on obesity in children. They note that children learn by modeling parents' and peers' preferences, intake and willingness to try new foods. Availability of, and repeated exposure to, healthy foods is vital to developing preferences and may overcome dislike of foods. Mealtime structure is vital with evidence suggesting that families who eat together consume more healthy foods. Furthermore, eating out or watching TV while eating is associated with a higher intake of fat. Parental feeding style is also significant. The authors found that authoritative feeding (determining which foods are offered, allowing the child to choose, and providing rationale for healthy options) is

associated with positive cognitions about healthy foods and healthier intake. Interestingly restriction of “junk-food” from government is associated with increased desire for unhealthy food and higher weight.

Rules from government and social policies could also potentially promote healthy behavior. Research shows that taste, followed by hunger and price is the most important factor in choosing snacks. Other researchers found that that young people associate junk food with happiness, pleasure, freedom, and satisfaction, whereas liking healthy food is considered odd. This suggests investment is required in changing meanings of food, and social perceptions in behavior of eating. As said by

the National Taskforce on Obesity (2005), economic policies such as taxing unhealthy options, providing incentives for the distribution of inexpensive healthy food, and investing in convenient entertaining facilities or the aesthetic quality of neighborhoods can enhance healthy eating and physical activity. Dietary factors have been studied extensively for its possible contributions to the rising rates of obesity. The dietary factors that are examined include nutriment consumption, sugary beverages, snack foods, and portion sizes. If we are serious then everyone should play a key role in fighting the disease against childhood obesity globally and improve child nutrition.